

REMARKS

Claims 1-8 are pending in the application. Claim 1 has been amended to indicate that the coating composition consists essentially of A) through C) and optionally D) one or more components selected from the group consisting of UV absorbers, catalysts, deaerating agents, coupling agents, flow control agents, solvents dyes and pigments, and that the application of UV light to the coating effectuates the formation of a solvent resistant surface on the coating. Support for the amendments can be found at page 6, line 24 to page 7, line 23, and page 8, lines 10-16 of the specification. Applicants assert that the amendments place the claims in form for allowance, or, in better form for appeal.

Rejection Under 35 U.S.C. § 102(b)

Claims 1-4 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,229,252 to Flynn et al. (hereinafter "Flynn").

The present invention is directed to a "dual cure" process for coating a substrate by (1) applying to the substrate a coating composition consisting essentially of:

- A) at least one compound which contains at least two (meth)acrylate groups and at least one isocyanate-reactive group and which is free from isocyanate groups and blocked isocyanate groups,
- B) at least one blocked polyisocyanate, which does not contain any ethylenically unsaturated groups,
- C) at least one photoinitiator, and
- D) optionally one or more components selected from the group consisting of UV absorbers, catalysts, deaerating agents, coupling agents, flow control agents, solvents dyes and pigments, and

(2) curing the coating composition by the action of UV light, which causes a solvent resistant surface to form on the coating, and (3) post-curing by increasing the temperature of the coating.

Flynn discloses a photoimageable composition for forming a solder mask that requires a "triple cure" process. The solder mask includes (1) a photopolymerizable acrylate chemical system which renders exposed portions insoluble to alkaline aqueous developers and (2) an epoxy chemical system which hardens the composition after exposure and development. The acrylate chemical system includes acrylate monomers, epoxy-acrylate oligomers and a photoinitiator. The epoxy chemical system includes an epoxy resin and a curative therefore. The composition further includes a cross-linking agent which is reactive with hydroxyl groups of the acrylate and epoxy chemical systems.

Thus, the photoimageable composition disclosed by Flynn must include components (a) through (e):

- (a) acrylic monomers,
- (b) photoinitiator(s),
- (c) epoxy-acrylate oligomers,
- (d) epoxy resins,
- (e) an acidic curative for the epoxy resins, and
- optionally (f) a cross-linking agent (col. 1, line 64 to col. 2, line 3).

As amended, the present claims do not allow for the inclusion of components (d) epoxy resins and (e) an acidic curative for the epoxy resins, which are required in the photoimageable composition disclosed by Flynn.

Further, Flynn specifically requires that after UV cure, the layer of photoimageable compositions remains strippable by common strippers (col. 6, lines 15-25). However, in the present invention, after UV cure a solvent resistant surface forms on the coating (page 8, lines 15-16).

While disagreeing with Applicants' contention that Flynn requires a "triple cure" process, the Examiner expressly points out on page 3 of the Final Office Action that prior to activation of the epoxy chemical system, the coating layer remains strippable by common strippers (which include solvents). As the inventive process provides a coating layer that forms a solvent resistant layer after UV cure and before thermal curing, the processes are distinctly different.

In order to anticipate a claim, a prior art reference must disclose every limitation in the claim. As Flynn does not disclose, and actually teaches away from the instant process, it cannot anticipate the claims. Further, the present claims do not allow for the inclusion of components (d) and (e), which are required in Flynn. Flynn does not disclose the presently claimed invention. Therefore, Claims 1-4 are not anticipated by Flynn and the rejection under 35 U.S.C. § 102(b) should be withdrawn.

Rejection Under 35 U.S.C. § 103(b)

Claims 5-8 stand rejected under 35 U.S.C. § 103(a) as being anticipated by Flynn in view of U.S. Patent No. 5,916,979 to Koegler et al. (hereinafter "Koegler"). The Examiner indicates that Koegler teaches the claimed blocking agents.

Koegler discloses an organosol polyester coating material that includes at least one linear and/or branched amorphous polyester in solution, at least one blocked polyisocyanate resin and/or at least one triazine resin. Koegler is not directed to UV-curing in any way. Koegler simply discloses the reaction of blocked NCO-groups with OH-groups, which is of limited relevance to the claimed invention. Using diisopropylamine as a blocking agent is known as is disclosed at page 5, line 14 of the specification.

Koegler does not provide any disclosure to forming a coating layer that is solvent resistant after UV cure and before thermal curing. Further, there is no disclosure in Koegler that would motivate one skilled in the art to remove components (d) and (e) from the photoimageable composition disclosed by Flynn, which the present claims effectively exclude.

As a further matter, Flynn is directed to a completely different and totally unrelated application from the present invention. The focus in Flynn is on compositions applied to form a solder mask on a printed circuit board. Conversely, the present invention relates to methods of coating metal coils, automobiles or automobile parts. The Examiner has made an incredible jump from microelectronics to automobile assembly line production.

The present invention addresses a need to provide coatings for a number of substrates made of various materials as described at page 7, line 24 to page 8, line 3 of the specification. The substrates can be, as non-limiting examples steel coils and/or automobiles. The invention is not directed to coatings used for producing printed circuits or solder masks. In fact, it is doubtful that the claimed coatings would even be suitable to make solder masks because the initially cured (after the first step) the coating could not be developed as required in such a technique. The invention is directed to a completely different field of art, i.e., coatings are not just coatings.

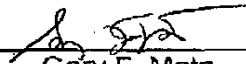
Thus no combination of Koegler and Flynn disclose or in any way suggest the claimed process. As such, the rejection of Claims 5-8 under 35 U.S.C. § 103(a) should be withdrawn.

CONCLUSION

Applicants assert that the amendments have placed the claims in form for allowance. In view of the above amendments and remarks, reconsideration of the rejections and allowance of Claims 1-8 are respectfully requested.

Respectfully submitted,

By


Gary F. Matz
Agent for Applicants
Reg. No. 45,504

Bayer Polymers LLC
100 Bayer Road
Pittsburgh, Pennsylvania 15205-9741
(412) 777-3897
FACSIMILE PHONE NUMBER:
(412) 777-3902
lo/MATZ/gfm095

Mo-6497

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